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ABSTRACT

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Partnerships in Teaching Critical Thinking

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ABSTRACT

In a collaborative project with Alverno College, twenty-two elementary and secondary schools created teacher designed plans for the infusion of critical thinking across the curriculum, developing the role of the teacher as change agent. Distinctive features of the program included a focus on critical thinking as a ability to be developed by students, recruitment of teacher teams from elementary and secondary schools, ongoing support and feedback for the teachers' work in the project, and active collaboration between college faculty and elementary and secondary school teachers.

The eighties have seen an unprecedented number of calls for increased quality in the schools. From "A Nation at Risk" to countless state and local reports, the demand for "better education" has been repeated with growing intensity. Unfortunately, the translation of "better" as simply "more" has led many to recommend surface solutions: adding more hours to the school day, more requirements for graduation, more credits for teacher certification and continued licensure requirements. Too often, the "more" of the proposals does not get at what happens during the hours of the school day: how teachers actually teach and how students actually learn. At the heart of the problems identified by the more thoughtful critics of American education is the need to help teachers teach more effectively.

Effective teaching appears to have two components as people talk about their hopes for better schools: 1) the teacher's ability and enthusiasm for teaching and 2) the impact of that teaching on the learning process and outcomes for students. Assisting students to become engaged in learning necessarily involves going beyond the mere dissemination of information by providing ways for learners to use and apply information, to probe the meaning behind phenomena, to address problems with real life analogues, etc. Thus, it should not be surprising that a focus on critical thinking is emerging in publications by and for teachers who are concerned what the Education Commission of the States has called the "new basics."

This paper will focus on a collaborative project, "Partnerships in Teaching Critical Thinking," involving Alverno College, in Milwaukee, Wisconsin, and twenty-one elementary and secondary schools in the metropolitan Milwaukee area over a three year period (1985-88), supported by a grant from the Fund for the Improvement of Post-Secondary Education (FIPSE). The goal of the project was to improve the development of critical thinking ability in elementary and secondary school students by improving the teaching of critical thinking. The project directors sought to work toward the establishment of curricular coherence through improved teaching and instructional collaboration for the development of critical thinking in a number of schools in Milwaukee and the surrounding area.

The project will be described using four distinctive features and outlining the processes and procedures used in the design of the collaborative work; the project results will be examined as they affected the teachers involved, other teachers in the schools, the students, and the college's teacher preparation programs.

Four distinctive features

The project was designed to avoid some of the pitfalls of existing teacher inservice. Many teachers complain that the typical inservice is limited to the presentation of information and does not translate into more effective teaching, that presenters have little sense of the teachers' local situation or needs, and that there is little follow-up to assist in the implementation of ideas or methods. These distinctive features of the project reverse the common pitfalls.

The first of the distinctive features of the program was its special focus on critical thinking as an ability to be developed by students. Rather than simply providing teachers with more factual information in their fields and about critical thinking in relationship to those fields, the project staff involved them in a process for breaking open the approaches of their disciplines and identifying the "embedded" thinking abilities that are appropriate to their students' developmental levels.

The choice of a critical thinking focus reflected a growing consensus among educators that this is a foundational ability for all intellectual endeavors. While there is consensus that critical thinking is important, there is little consensus on what the term means. The project staff used a broad definition of critical thinking derived from the curricular experience of the Alverno faculty and from work at the college with other educators in a recent project to articulate its meaning. The staff treated critical thinking as a constellation of abilities that includes such things as synthesis, judgment, reflection, questioning, problem solving, organization, evaluation, articulating ideas, awareness of values in making choices, analytic thinking and communicating and even collaborative thinking and communicating. Critical thinking was seen as including logical approaches to problems and creative applications that may seem at first out of the realm of logic. From interaction with elementary and secondary teachers in consulting relationships and in the planning for the project, the project directors grew confident that such a conceptualization of critical

thinking development for students is compatible with the ideas expressed by high school teachers.

The project was not designed to "hand" a packaged design to the teacher; rather, the team challenged each team to draw from a variety of resources and to define their own conceptualization, appropriate to their school's needs. A central activity in the process involved the task of "breaking open" the teachers' understandings and expectations of what an effective critical thinker does. It assisted the teachers to move the focus away from information as "right answers" to the use and application of information in thinking through problems and situations.

In an effort to promote effective change, program participants were recruited on a team basis. The screening iterviews determined if an application school had idetified an interdisciplinary group committed to the developmet of critical thinking across the curriculum. During the year-long implementation phase of the program, the participants from each school formed a network of mutual support. In designing a plan specific to their school's situation and needs, they saw that a core group of teachers in a school would also be more likely than a single individual to be able to promote broader institutional change. In addition, the team concept helped ensure commitment of school administrators to the program.

The program was also distinctive in its design to provide teachers with the ongoing support and feedback necessary to ensure the success of their efforts to improve. Rather than simply teaching a course or workshop, the project staff assisted

teachers to implement and refine improvements in their own classrooms. During the spring workshop period, teacher piloted implementation of strategies in their own classrooms and completed reflective logs shared with others in their own team or in like age/subject groupings and also received feedback from their planning committee mentor. During the implementation year, the team visited the schools and provided other ongoing assistance to the team. The program was designed to assist teachers to be responsible agents of curriculum change, within the parameters of their local school goals.

Finally, all work on the project was based on active collaboration between Alverno faculty and elementary and secondary teachers. Joint planning promoted the concept that college and school personnel are colleagues in a common enterprise. All aspects of the workshops, from presentations to facilitation and mentoring of teams, was shared equally by the seven members of the planning committee. Furthermore, the planning committee experience provided important leadership training for the five elementary and secondary teachers.

Project description

Alverno faculty Mary Diez and Georgine Loacker were awarded a FIPSE grant in spring, 1985. They formed a steering committee including five teachers from local elementary and secondary schools who were involved in both the planning and implementation of the project throughout the three year grant period.

The program focused on the development of critical thinking skills by students. There were two cycles of the program, each

one involving a different group of teachers in a year-long effort. Each cycle of the program consisted of three phases. In the first, or planning, phase, project staff carefully screened the schools and selected those meeting the criteria (e.g., broad interdisciplinary interest represented in at least five team members, administrative support for teachers to have time to work together, and willingness to develop evaluative procedures). The second phase was a workshop (fifty clock hours spread over five Saturdays in the spring and a week in the summer) for the teams of teachers, focused on instructional design, student assessment, and strategies for infusing critical thinking across the curriculum. Finally, throughout the academic year following each workshop, project staff conducted site visits and mini-workshops to assist the participants in implementing their plans in their schools.

The screening process assisted schools to enter the project with a clear set of expectations. Two-person teams from the planning committee conducted visits to the applicant schools, evaluating the level of commitment on the part of the schools' administrators and of the individual teachers. They assisted the teachers to articulate real, learner-centered needs of their students, which served as input for the refinement of the workshop design.

To ensure the involvement of practicing elementary and secondary teachers in the process, the grant provided payment for substitutes for the planning team teacher members when they took part in the screening visits. These teachers were also involved in the planning and teaching of the workshop, receiving an honorarium

for their time commitment.

While the workshop provided input on various approaches to critical thinking, curriculum design, and teaching and assessment strategies, its main outcome was the development by each team of a plan for infusing critical thinking across the curriculum. The plans were designed to meet the particular school populations, faculties, and current curricular focus of each school. For example, one suburban public school team developed a focus on questioning skills, using Bloom's taxonomy as a way to create questions that would increasingly lead students to higher order thinking; they also worked to develop student questioning processes in increasingly complex modes.

Several public and private schools built upon their prior work in writing across the curriculum as a base in the design of their plans. A private urban elementary school developed a sequence of themes for a month by month focus, beginning with observing and moving through "describing," "inferring," "relationship-making," "organizing," etc. Several schools adapted a national thinking skills package mandated by their urban public school district as a separate course; these schools worked to make applications across the content areas from the vocabulary and skills students learned in the course.

The teams worked in a variety of ways during the workshop, at times meeting across schools in subject area or grade level clusters, at other times building their own plan's design with fellow team members. Each had a mentor from the planning team, who responded to their work in progress and suggested resources

to support it. The workshop carried three graduate credits, which included the expectation of superised curriculum activities during the following school year.

Project Results: Effect on Participants

One measure of the effect of the project, or courses, was the 21 teams' implementation of their critical thinking plans. Of the 13 schools in the first round of the project (1985-1987), 11 reported 50% or more of their plan had been implemented as of December, 1987. The two schools reporting less activity were affected by reduction in force or major staff assignment changes beyond their control. Of the 8 schools in the second round of the project (1986-1988), 7 reported that they were well on their way to full implementation by December, 1987. The eighth, a school district team, was affected by a protracted contract dispute, but had implemented nearly all of their plan by May, 1988.

In a more substantial way, the effect on participants can be measured by the changes and insights they reported. Visits were made by the planning committee to each site in the fall after their team participated in the project; the two committe members completed a report on the visit. Schools submitted reports on their progress at the end of the implementation year. The following impact descriptions are synthesized from these reports and from an additional questionnaire sent to all 170 participants on the 21 teams.

Participants reported that there were important impacts of the project on their schools/districts. For example, the work begun by teachers representing different subject areas was continued

in ongoing interdisciplinary exchange among faculty in the schools. Teachers reported more discussion with their colleagues about teaching and learning; team members often described their new relationship to other faculty as "resource person."

In their own approaches to teaching, teachers reported that they had become more conscious of the need to design learning to involve students actively. Several of the schools developed lesson plan formats to make critical thinking a subgoal of every lesson, assisting them to teach more deliberately. Teachers reported incorporating more group work, more explicit attention to student processing of information, and increased refinement of questioning techniques. The shift was described by some as "no longer simply imparting information, but making the students responsible for their learning."

In assessment, the teachers reported that they were exploring new ways to assess student learning, attempting to integrate the students' processing skills with the content they were learning. These ways included more use of essay questions, reflective journals, lab reports, projects, and simulations.

Perhaps the most significant result is one that reflects the impact on the participants' view of themselves as teachers. "For the first time in years," one wrote, "I am excited about teaching." Many reported a new enjoyment in going to their classes, energized by the differences that they saw in their students' responses to their subject areas.

A second impact related to their view of themselves as professionals. Nearly all of the participating teams included

all-faculty inservices as part of their plan. Taking the role of presenter before one's colleagues is a potentially intimidating experience, but it provided these teachers with an experience of gaining the respect of their peers. In school after school, the reports identified positive response of fellow teachers to the team's presentation as a high point of the participants' experience.

Beyond their own school inservices, school team members gave more than a dozen presentations at professional meetings and conventions in Wisconsin, sharing their plans and the experience of implementation. School teams also maintained communication with other teams in the project, building a network of faculty interested in critical thinking.

Project Results: Effect on Other Teachers

All but two of the participating schools held at least one inservice for faculty in their schools; some held as many as eight in the course of the implementation. The involvement of the faculty who were not part of the original team varied, as did the sizes of the participating schools. In general, the elementary schools were able to develop plans to involve all the teachers in their buildings and to implement their plans effectively; this may reflect the nature of communication patterns in the elementary school and the interdisciplinary nature of elementary teaching. With middle and high schools, however, there was much variation. The most effective plans built on the structures of the schools; for example, in one high school, team members gave two inservice presentations, followed by meetings of team members with each department at the

department's regular meeting time. In one middle school, the "unit" meetings became the vehicle for the team to connect with other faculty in providing inservice in how to work with developing the skills of students.

As mentioned above, a nearly universal experience reported by the team members was that their initial fears at presenting an inservice to their peers were reversed when they were positively, even enthusiastically received by their fellow faculty. In one urban public middle school, the principal was so pleased with the response to the inservice that he began a plan of identifying faculty to work together in teams on other goals and to plan inservices out of their work.

In two districts and three schools, the administration incorporated explicit statements about critical thinking into the philosophy and goal statements as a result of the work of the school's critical thinking team.

Project Results: Students

When asked to identify how many of the students in their schools had been impacted by the school's work in critical thinking, the team members gave a range (e.g., 250-400). Taking only the most conservative numbers from each school, the total is over 11,000 students.

Because each school designed its own evaluation plan, the data varied; most, however, included such types of student data as the following: videotapes of classroom activities, examples of student perofrmance, student reflective logs, sample assesments, interviews with students, surveys of students andstandardized test data.

Faculty described the effects on students in a variety of ways. Most often mentioned was the sense of excitement and engagement in learning that they saw in their students; this was mentioned by over half of the teams. Another major effect was the increased student awareness of links between and among subject areas, and the common application of thinking skills in different subject areas. (One student got the attention of his teacher when he said, "Miss D, do you know you're using critical thinking to solve this problem?") Moreover, faculty reportedthat they saw their students becoming more reflective and better able to see multiple perspectives. In surveys, their students indicated that the development of their thinking abilities had helped them to study differently, to be more effective on tests, and to <u>understand</u> what they are learning.

While project directors requested that the administrators of the schools involved in the project provide information about student testing data, they realized that such data, even if available, would be of questionable value so soon after project implementation. Tyler (1987) notes that

> Because curriculum improvement projects that involve more than superficial change require those participating to learn new roles, gain new understanding, and develop new skills, usually six or severn years will be necessary to get a significant improvement established. It cannot be a quick, mass conversion.

Even if Tyler's point were not valid, the data on student performance from many of the schools could not be isolated in some way to identify the students who were impacted by the

project. To further complicate matters, one large district with seven of the schools in the project shifted from one test to another at about the time of the implementation.

Project Results: The College Teacher Education Program

Because this project linked the college's strong commitment to teacher education and its growing expertise in critical thinking, it has had a special impact on the teacher education program. First, it provided the teacher education faculty with new colleagues in the public and private schools whose work they know first hand. A number of the teachers who participated in the project have become cooperating teachers, with whom the college places field work students and student teachers. And, as the department received requests from other schools for workshops or inservices in critical thinking, they have involved teachers from the project to be co-presenters or, in some cases, the sole presenters representing the project.

Second, the project provided the department with models of curriculum design and intervention that have been incorporated into classes for pre-service teacher education students. An area of concern among teacher educators is the danger of "losing touch" with the situations as they are in the schools. The department's work with the teachers in the project assisted them to both respect and report the work they do. Much of this work has been incorporated into a course focused on the development of critical thinking throughout the curriculum. In that course, students participate in a simulation that involves them in the kind of curriculum design work the project teachers engaged in.

Thus, the college has begun to shape--from the very beginning of teacher training--the sense of the role of the teacher as a responsible agent in curriculum development.

Implications for College-School Collaboration

What generalizations might be drawn from the "Partnerships in Teaching Critical Thinking Project" undertaken by faculty at Alverno College and elementary and secondary teachers in public and private schools?

First, elementary and secondary teachers, as professionals, are clearly capable of designing curricular change and assisting their colleagues in its implementation. With the national call for restructuring and renewal of schools, our experience provides support for the belief that teachers are a valuable resource, capable of a major role in the design of curriculum appropriate to meet the needs of their students. As recently described by Darling-Hammond (1988), however, the professionalization of teachers requires a shift in assumptions about the role of teachers, on the part of both college and university consultants and school administrators, to a sense of the teacher as expert decision maker (i.e., away from the teacher as one who simply follows a standardized, preset pattern.)

Second, the success of curricular change depends, to a great degree, on the support of administration, particularly in the providing of common preparation periods or other common released time. The teams in the project that were less successful reported lost momentum and lowered morale, tied to the difficulty they experienced in finding time to work together. The teams that were

most successful in maintaining their plans and continuing their development had one thing in common: structured time to work in ongoing ways. In one case, in an urban public high school, the principal provided core team members with a common planning period daily and resources to support their work. In a suburban elementary school, the principal worked with the core team to use faculty meeting time every two weeks for ongoing inservice, devoted both to sharing what teachers were doing and to providing common input or exploration to move the whole faculty further.

Third, collaborative work between college faculty and elementary and secondary teachers has important benefits for both groups. College and university faculty at times view themselves (or are perceived as as viewing themselves) as "experts" in a one-way relationship with practicing teachers. The experience of the "Partnerships in Teaching Critical Thinking" project suggests that the relationship is a two-way street, with college faculty able to gain a great deal from observing the ways in which teachers grapple with the design of curriculum appropriate to their situations and students. The mutual respect between college and pre-college level teachers facilitated development that reached far beyond the expectations of either group in the project.

This project suggests, then, a rich future in building new role relationships for teachers for teachers in elementary and secondary schools, working with college and university faculty in bringing about needed and important change in the schools.

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